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ATLANTIC MACKEREL FISHERY, 1804-1965

JAN 2 1968
FISH & WILDLIFE SERVICE

The mackerel, Scomber scombrus, has a streamlined body and unusual coloration. Iridescent greenish blue covers most of the upper body, turning to blue-black on the head--the belly is a silver white.

UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF COMMERCIAL FISHERIES

Fishery Leaflet 603

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ATLANTIC MACKEREL FISHERY, 1804 - 1965

By

DWIGHT L. HOY and GEORGE M. CLARK

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ATLANTIC MACKEREL FISHERY, 1804 - 1965

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DWIGHT L. HOY AND GEORGE M. CLARK

HISTORY
ATLANTIC MACKEREL FISHERY

American colonists of the 1600's considered mackerel one of their most important staple commodities. Mackerel was a valuable source of food at their very doorsteps free for the taking, and return of the schools each spring was eagerly anticipated.

Fluctuation of catches from year to year created apprehension among the colonists, and, as early as 1670, they passed laws to prevent overfishing--the season and methods of capture were regulated. Little was known of the curious pattern of scarcity to superabundance which, even today, presents a fascinating and elusive puzzle.

Earliest records (1626) indicate that the principal commercial method of catching mackerel was by haul seine, which was the major fishing gear until 1800 when "drailing" was favored. For this method of fishing, a vessel was fitted with a number of outriggers (poles) to which lines were attached. On each line was tied a sinker and a hook, which was generally baited with pork rind. The vessel had to be underway before the mackerel would bite. About 1812 it became general practice to "chum" the mackerel to the vessel by throwing chopped bait overboard. This considerably increased the efficiency of the hook and line fishery. In 1816 the sinker was attached to the shank of the hook, forming a unit called a "jig," which had the advantage of being more durable and effective.

The purse seine came into general use about 1850 and by 1870 had largely displaced the hook and line as a commercial gear. To the present time, the purse seine has continued to be the prime mackerel gear during periods of plenty. The advent of power to replace sail further increased the efficiency of the purse seiners. During recent years, mackerel have been quite scarce and seiners have not been able to operate profitably. In this period of scarcity, the fishing gears that have caught most of the mackerel are the pound net and floating trap. A small gill net fishery that concentrates on the spring and fall runs of fish has not been successful in recent years.

The mackerel has a streamlined shape and unusual coloration. Iridescent greenish blue covers most of the upper body, turning to blue-black on the head --the belly is a silver white. The body is barred with from 23 to 33 bands running down from the dorsal surface in a wavy course to the lateral line region. Brilliant as the colors are in life, they fade quickly after capture. Adult fish are between 14 and 18 inches long and weigh 1-1/4 to 2-1/2 pounds. Occasional individuals measuring 22 inches may weigh as much as 4 pounds, and in 1925, a 7-1/2-pound fish was caught.

Mackerel are moderately prolific, and a female may produce more than 500,000 eggs in a season, although not more than 50,000 are spawned at one time. During an average spawning life of 4 years, one fish may produce 2 million eggs. The eggs are released wherever the fish happens to be when they are ripe.

Off the American coast, spawning begins in mid-April in the latitude of Cape Hatteras, in May off New Jersey, in June off southern Massachusetts, and in late June and early July off Nova Scotia and along the southern side of the Gulf of St. Lawrence. Spawning occurs along almost the entire breadth of the Continental Shelf, with the most productive area between the Chesapeake Bay and southern New England.

In the egg and larval stages many factors influence mortality. Adverse winds may push the waters in an unfavorable direction when the eggs are floating or when the fry lack the ability to control their movements. Both eggs and larvae may thus be carried into unfavorable conditions where they cannot survive, for example, where food is scarce. Reduced survival for several consecutive seasons is disastrous, and the resulting havoc is felt throughout the industry for several years.

Note.--Dwight L. Hoy, Program Coordinator, and George M. Clark, Fishery Reporting Specialist, Branch of Fishery Statistics, Division of Economics, Bureau of Commercial Fisheries, Gloucester, Mass.

Besides contending with the caprices of nature, mackerel are preyed upon by many forms of sea life, such as whales, porpoises, sharks, tuna, bonito, bluefish, and striped bass. Cod, squid, and other fish destroy great numbers of young fish less than 4 to 5 inches long. Sea birds also devour multitudes of the smaller fish.

Mackerel grow rapidly. Earliest hatched fry will have grown to 2-1/2 inches in length by June, 2-1/2 to 5 inches by August, and will have reached "blink" size (6-1/2 inches) by the end of August. Young fish caught in October are called "tacks" or "spikes" and are 7 to 8 inches long. Most fish of the year will be 8 to 9 inches by very late fall. When the second summer has passed, the average fish of this year class, known as "tinkers," will be 12 to 14 inches long. They grow gradually and reach maturity in the third year when reproduction begins.

Mackerel eat almost all marine animals not too big to be swallowed or too small to be seen. At times they are caught packed full of the tiny crustacean Calanus, the "red feed" or "cayenne" so named by fishermen. They eat any small fish larvae and minute pelagic crustacea, such as crab larvae and copepods. Euphausiid shrimps rank high on its menu; and squid, sand launce, and annelid worms have been found in their stomachs.

Instead of being one vast homogeneous stock as was once supposed, the mackerel native to the American coast are actually contained in two populations--a southern and a northern. The southern vanguard appears from offshore in early April, advancing toward Virginia, Maryland, and New Jersey and moving slowly northward to spawn off New Jersey and Long Island. In late May, the northern contingent enters southern New England waters for a short period, mingling with the other contingent but soon moving on again, and in June or early July spawns off Nova Scotia and in the Gulf of St. Lawrence. Such spring movements appear to be spawning migrations and are probably triggered by water temperature, about 46° F. being critical. For many years Gloucester fishermen took advantage of the early appearance of the southern population, sailed their boats down the coast to fish off New Jersey, and remained with the schools during the northward migration.

As autumn approaches, fish that summer along the Maine coast, mostly of the southern population, work back southward toward Cape Cod and disappear, after October, off Block Island. The northern contingent returns through the Gulf of Maine in November or early December, finally vanishing off Cape Cod. Infrequent catches have been made throughout the winter by otter trawlers and New Jersey pound nets, but by Christmas all mackerel usually have dropped from sight, probably into deep water where they winter in a more acceptable temperature. Some farfetched stories have grown around this annual disappearance such as the fish having all migrated to Europe or having buried themselves in the mud.

Fresh mackerel is considered by many to be one of the choicest food fishes. In the early 1800's, mackerel were caught close inshore, dressed, and placed in tubs of salt water, which was frequently changed to keep the fish cool. The object was to catch the mackerel and get them to market before daylight so that they could be sold in the cool of the morning. Today, the freshly caught mackerel are immediately iced and packed in boxes for shipment. Improved handling and transportation methods have considerably increased the radius of fresh fish sales.

In the year 1818, the first trip was made to catch mackerel for salting. As the market for salt mackerel increased, the fleet grew, and larger vessels were built to operate throughout the entire range of the fishery. Within 20 years, more than 900 sailing vessels operated from New England, catching as much as 100 million pounds per year. In years of local scarcity, some vessels even sailed to Europe for their fare.

About the time that power replaced sail as the method of propulsion, the market began to demand fresh and frozen mackerel in preference to the salted product. The expanding fresh mackerel market required the vessels to make shorter and more frequent trips. By the 1920's, most fishermen were using power-driven vessels, and the resultant quick trips frequently flooded the market and depressed prices. The canneries depended upon these low-priced fish and packed a palatable product that found wide acceptance.

The catch of mackerel in the Gulf of Maine is subject to considerable variation from year to year. A good year may bring catches 100 times greater than a poor year. When mackerel were plentiful in the 1940's, they were usually the fifth most valuable New England marine species, and their value was surpassed only by lobsters, haddock, cod, and ocean perch. Recent years of scarcity have forced fishermen and processors away from dependence on mackerel.

The astonishing changes in abundance from season to season are due largely to the degree of survival of the young of a year. Sustained good annual catches depend principally on a series of successful year classes. Failure of several year classes will be followed by sharp declines in the catches. A year when most fish caught are large, with very few small fish being taken anywhere, suggests that the fishing in the next few years will be disappointing. On the other hand, a year in which great numbers of small fish are apparent often indicates that several years of heavy landings are in the offing.

(Cont. on page 9)

ATLANTIC MACKEREL CATCH, 1804 - 1965

(THOUSANDS OF POUNDS)

YEAR	CANADA	UNITED STATES	YEAR	CANADA	UNITED STATES	TOTAL
	QUANTITY	QUANTITY		QUANTITY	QUANTITY	QUANTITY
1804	(1)	3,597	1870	(1)	146,554	(1)
1805	(1)	3,924	1871	(1)	121,340	(1)
1806	(1)	3,764	1872	(1)	80,612	(1)
1807	(1)	4,258	1873	(1)	82,307	(1)
1808	(1)	3,491	1874	(1)	120,381	(1)
1809	(1)	4,039	1875	(1)	55,949	(1)
			1876	31,362	99,283	130,645
1810	(1)	5,744	1877	49,556	50,046	99,602
1811	(1)	7,963	1878	55,409	73,675	129,084
1812	(1)	2,692	1879	57,316	82,725	140,041
1813	(1)	1,719				
1814	(1)	614	1880	70,331	131,128	201,459
1815	(1)	7,349	1881	32,412	146,871	179,283
1816	(1)	14,173	1882	34,293	142,074	176,367
1817	(1)	17,098	1883	38,632	85,007	123,639
1818	(1)	21,210	1884	54,534	179,279	233,813
1819	(1)	45,814	1885	44,720	123,728	168,448
			1886	45,832	30,000	75,832
1820	(1)	52,920	1887	36,195	33,099	69,294
1821	(1)	50,802	1888	18,953	19,709	38,662
1822	(1)	73,354	1889	19,064	10,212	29,276
1823	(1)	66,359				
1824	(1)	87,703	1890	29,440	10,945	40,385
1825	(1)	116,414	1891	40,557	19,362	59,919
1826	(1)	72,644	1892	28,161	21,963	50,124
1827	(1)	87,088	1893	22,536	25,234	47,770
1828	(1)	108,605	1894	17,329	22,541	39,870
1829	(1)	103,414	1895	12,734	11,975	24,709
			1896	13,757	35,300	49,057
1830	(1)	141,161	1897	8,342	10,601	18,943
1831	(1)	175,522	1898	10,150	10,047	20,197
1832	(1)	101,800	1899	10,381	13,481	23,862
1833	(1)	102,020				
1834	(1)	115,725	1900	25,210	45,831	71,041
1835	(1)	89,146	1901	23,155	34,769	57,924
1836	(1)	79,815	1902	13,075	23,156	36,231
1837	(1)	63,224	1903	25,032	25,560	50,592
1838	(1)	50,678	1904	11,036	19,562	30,598
1839	(1)	33,986	1905	15,055	22,316	37,371
			1906	20,527	11,749	32,276
1840	(1)	23,107	1907	15,438	24,496	39,934
1841	(1)	25,415	1908	22,747	20,836	43,583
1842	(1)	34,571	1909	16,419	16,959	33,378
1843	(1)	29,495				
1844	(1)	39,531	1910	6,980	5,665	12,645
1845	(1)	92,580	1911	9,013	12,061	21,074
1846	(1)	82,149	1912	10,798	10,161	20,959
1847	(1)	115,275	1913	21,546	13,517	35,063
1848	(1)	137,347	1914	14,372	20,983	35,355
1849	(1)	95,620	1915	18,098	23,262	41,360
			1916	15,608	29,657	45,265
1850	(1)	111,007	1917	16,706	36,919	53,625
1851	(1)	150,671	1918	19,678	20,167	39,845
1852	(1)	90,664	1919	22,988	16,225	39,213
1853	(1)	61,020				
1854	(1)	61,939	1920	14,235	19,264	33,499
1855	(1)	96,997	1921	14,555	10,035	24,590
1856	(1)	98,076	1922	25,122	12,750	37,872
1857	(1)	77,205	1923	14,175	33,900	48,075
1858	(1)	60,225	1924	21,559	27,103	48,662
1859	(1)	45,632	1925	18,766	49,207	67,973
			1926	11,549	68,299	79,848
1860	(1)	107,856	1927	15,880	60,339	76,219
1861	(1)	88,910	1928	12,378	44,904	57,282
1862	(1)	119,380	1929	15,276	64,119	79,395
1863	(1)	140,466				
1864	(1)	126,961	1930	17,847	51,870	69,717
1865	(1)	121,717	1931	19,625	47,392	67,017
1866	(1)	108,204	1932	17,845	60,854	78,699
1867	(1)	95,697	1933	26,332	41,537	67,869
1868	(1)	81,716	1934	19,082	2/52,360	71,442
1869	(1)	106,252	1935	16,050	65,086	81,136

SEE FOOTNOTES ON NEXT PAGE.

(CONTINUED ON NEXT PAGE)

ATLANTIC MACKEREL CATCH, 1804 - 1965 - Continued

(THOUSANDS OF POUNDS)

YEAR	CANADA	UNITED STATES	TOTAL
	QUANTITY	QUANTITY	QUANTITY
1936	22,764	2/52,496	75,260
1937	23,916	26,601	50,517
1938	28,556	43,289	71,845
1939	52,065	32,594	84,659
1940	35,735	40,631	76,366
1941	35,113	2/46,357	81,470
1942	30,308	51,074	81,382
1943	37,086	2/59,493	96,579
1944	34,273	74,185	108,458
1945	40,207	58,673	98,880
1946	29,518	2/52,081	81,599
1947	26,263	58,803	85,066
1948	25,876	51,060	76,936
1949	33,523	42,070	75,593
1950	27,230	22,094	49,324
1951	24,742	15,748	40,490
1952	21,991	18,187	40,178
1953	18,458	8,545	27,003
1954	25,512	4,017	29,529
1955	24,862	3,871	28,733
1956	21,133	4,034	25,167
1957	19,403	2,418	21,821
1958	16,094	4,574	20,668
1959	9,451	4,047	13,498
1960	13,136	3,078	16,214
1961	12,353	3,012	15,365
1962	14,835	2,076	16,911
1963	17,197	2,915	20,112
1964	23,908	4,732	28,640
1965	24,855	4,328	29,183

1/ DATA NOT AVAILABLE PRIOR TO 1876.

2/ PARTLY ESTIMATED.

NOTE:--UNITED STATES AND CANADIAN DATA FOR THE YEARS FROM 1804 TO 1928, INCLUSIVE, HAVE BEEN TAKEN FROM THE BUREAU OF FISHERIES REPORT ENTITLED "STATISTICS OF THE MACKEREL FISHERY OFF THE EAST COAST OF NORTH AMERICA, 1804-1930", BY OSCAR E. SETTE AND A. W. H. NEEDLER. THESE DATA ARE ESTIMATES BASED ON RECORDS OF THE NEW ENGLAND AND CANADIAN MACKEREL FLEET LANDINGS.

COMPLETE SURVEYS WERE MADE BY THE BUREAU OF FISHERIES FOR THE YEARS FROM 1887 TO 1891 INCLUSIVE, 1902, 1919, AND 1924. THESE DATA SUBSTITUTED FOR THE ESTIMATES FOUND IN THE REPORT.

AFTER 1928, COMPLETE INFORMATION WAS AVAILABLE ON U.S. LANDINGS FOR ALL YEARS EXCEPT 1934, 1936, 1941, 1943, AND 1946. DATA FOR THESE YEARS ARE PARTLY ESTIMATED.

CANADIAN LANDINGS AFTER 1930 WERE OBTAINED FROM "CANADIAN FISHERIES STATISTICS," DOMINION BUREAU OF STATISTICS. NEWFOUNDLAND LANDINGS ARE NOT INCLUDED.

ATLANTIC MACKEREL CATCH, BY STATISTICAL REGIONS, 1871 - 1965

YEAR	REGION XIX - GULF OF ST. LAWRENCE			REGION XXI - ATLANTIC COAST OF NOVA SCOTIA AND BAY OF FUNDY			REGION XXII - NEW ENGLAND 1/	REGION XXIII - MIDDLE ATLANTIC	GRAND TOTAL	
	CANADA	UNITED STATES	TOTAL	CANADA	UNITED STATES	TOTAL	UNITED STATES	UNITED STATES	CANADA	UNITED STATES 3/
	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY
1871	(2)	(2)	(2)	61,312	(2)	(2)	(2)	(2)	(1)	121,340
1872	(2)	(2)	(2)	32,737	(2)	(2)	(2)	(2)	(1)	80,612
1873	(2)	20,793	(2)	33,773	(2)	(2)	(2)	(2)	(1)	82,307
1874	(2)	14,902	(2)	31,628	(2)	(2)	(2)	(2)	(1)	120,381
1875	(2)	3,073	(2)	24,842	(2)	(2)	(2)	(2)	(1)	55,949
1876	12,425	1,298	13,723	18,937	(2)	(2)	(2)	(2)	31,362	99,283
1877	19,151	1,976	21,127	30,405	(2)	(2)	(2)	(2)	49,556	50,046
1878	19,687	16,719	36,406	35,722	(2)	(2)	(2)	(2)	55,409	73,675
1879	29,812	2,915	32,727	27,504	(2)	(2)	(2)	(2)	57,316	82,725
1880	37,068	1,971	39,039	33,263	(2)	(2)	(2)	(2)	70,331	131,128
1881	15,721	127	15,848	16,691	(2)	(2)	(2)	(2)	32,412	146,871
1882	14,257	-	14,257	20,036	(2)	(2)	(2)	(2)	34,293	142,074
1883	16,860	7,740	24,600	21,772	(2)	(2)	(2)	(2)	38,632	85,007
1884	12,111	5,302	17,413	42,423	(2)	(2)	(2)	(2)	54,534	179,279
1885	16,017	7,471	23,488	28,703	(2)	(2)	(2)	(2)	44,720	123,728
1886	19,132	17,033	36,165	26,700	(2)	(2)	(2)	(2)	45,832	30,000
1887	13,017	4,743	17,760	23,178	(2)	(2)	(2)	(2)	36,195	33,099
1888	6,940	2,825	9,765	12,013	(2)	(2)	(2)	(2)	18,953	19,709
1889	8,199	1,628	9,827	10,865	(2)	(2)	(2)	(2)	19,064	10,212
1890	9,561	839	10,400	19,879	(2)	(2)	(2)	(2)	29,440	10,945
1891	12,081	393	12,474	28,476	(2)	(2)	(2)	(2)	40,557	19,362
1892	14,834	588	15,422	13,327	(2)	(2)	(2)	(2)	28,161	21,963
1893	12,146	1,101	13,247	10,390	4,237	14,627	7,014	(2)	22,536	25,234
1894	9,256	1,130	10,386	8,073	6,492	14,565	2,863	(2)	17,329	22,541
1895	7,179	1,458	8,637	5,555	2,155	7,710	2,389	(2)	12,734	11,975
1896	5,439	882	6,321	8,318	4,269	12,587	10,138	(2)	13,757	35,300
1897	3,297	449	3,746	5,045	586	5,631	2,517	(2)	8,342	10,601
1898	5,356	104	5,460	4,794	945	5,739	2,824	(2)	10,150	10,047
1899	3,586	-	3,586	6,795	219	7,014	6,223	(2)	10,381	13,481
1900	5,364	13	5,377	19,846	3,081	22,927	27,350	(2)	25,210	45,831
1901	7,076	-	7,076	16,079	4,046	20,125	14,954	(2)	23,155	34,769
1902	5,472	-	5,472	7,603	1,888	9,491	11,872	(2)	13,075	23,156
1903	5,752	68	5,820	19,280	3,565	22,845	9,251	(2)	25,032	25,560
1904	2,300	9	2,309	8,736	3,051	11,787	6,119	(2)	11,036	19,562
1905	4,268	54	4,322	10,787	4,365	15,152	6,701	(2)	15,055	22,316
1906	5,294	123	5,417	15,233	1,321	16,554	3,031	(2)	20,527	11,749
1907	6,657	226	6,883	8,781	3,362	12,143	9,123	(2)	15,438	24,496
1908	4,647	488	5,135	18,100	5,238	23,338	4,461	(2)	22,747	20,836
1909	3,993	483	4,476	12,426	4,772	17,198	3,537	(2)	16,419	16,959

SEE FOOTNOTES AT END OF TABLE.

(CONTINUED ON NEXT PAGE)

ATLANTIC MACKEREL CATCH, BY STATISTICAL REGIONS, 1871 - 1965 - Continued

YEAR	REGION XIX - GULF OF ST. LAWRENCE			REGION XXI - ATLANTIC COAST OF NOVA SCOTIA AND BAY OF FUNDY			REGION XXII - NEW ENGLAND 1/	REGION XXIII - MIDDLE ATLANTIC	GRAND TOTAL	
	CANADA	UNITED STATES	TOTAL	CANADA	UNITED STATES	TOTAL	UNITED STATES	UNITED STATES	CANADA	UNITED STATES 3/
	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY
1910	3,881	162	4,043	3,099	666	3,765	578	(2)	6,980	5,665
1911	2,664	-	2,664	6,349	2,644	8,993	2,397	(2)	9,013	12,061
1912	3,110	20	3,130	7,688	710	8,398	4,019	(2)	10,798	10,161
1913	7,156	201	7,357	14,390	1,471	15,861	4,488	(2)	21,546	13,517
1914	7,163	719	7,882	7,209	1,016	8,225	5,901	(2)	14,372	20,983
1915	8,728	157	8,885	9,370	1,875	11,245	10,244	(2)	18,098	23,262
1916	10,131	-	10,131	5,477	1,956	7,433	15,726	(2)	15,608	29,657
1917	6,276	-	6,276	10,430	4,069	14,499	15,267	(2)	16,706	36,919
1918	6,407	-	6,407	13,271	3,472	16,743	7,589	(2)	19,678	20,167
1919	9,776	46	9,822	13,212	3,784	16,996	2,373	(2)	22,988	16,225
1920	8,336	-	8,336	5,899	2,136	8,035	5,511	(2)	14,235	19,264
1921	7,102	8	7,110	7,453	2,665	10,118	939	(1)	14,555	10,035
1922	10,225	167	10,392	14,897	1,614	16,511	3,106	(1)	25,122	12,750
1923	6,918	-	6,918	7,257	996	8,253	10,878	(1)	14,175	33,900
1924	11,114	-	11,114	10,445	1,004	11,449	9,203	(1)	21,559	27,103
1925	7,705	-	7,705	11,061	1,754	12,815	25,190	(1)	18,766	49,207
1926	5,127	-	5,127	6,422	2,262	8,684	34,359	(1)	11,549	68,299
1927	9,267	-	9,267	6,613	197	6,810	31,394	11,236	15,880	60,339
1928	5,535	-	5,535	6,843	272	7,115	24,001	7,408	12,378	44,904
1929	4,746	-	4,746	10,530	881	11,411	36,939	6,186	15,276	64,119
1930	5,380	-	5,380	12,467	145	12,612	33,395	7,216	17,847	51,870
1931	6,606	-	6,606	13,019	287	13,306	46,447	658	19,625	47,392
1932	7,516	-	7,516	10,329	768	11,097	59,320	766	17,845	60,854
1933	6,025	-	6,025	20,307	1	20,308	40,831	705	26,332	41,537
1934	4,982	-	4,982	14,100	-	14,100	50,473	1,887	19,082	52,360
1935	5,353	-	5,353	10,697	-	10,697	61,950	3,136	16,050	65,086
1936	4,453	-	4,453	18,311	-	18,311	49,272	3,224	22,764	52,496
1937	7,835	-	7,835	16,081	496	16,577	22,885	3,220	23,916	26,601
1938	7,455	-	7,455	21,101	356	21,457	38,990	3,943	28,556	43,289
1939	10,403	-	10,403	41,662	516	42,178	27,483	4,595	52,065	32,594
1940	12,222	-	12,222	23,513	179	23,692	35,791	4,661	35,735	40,631
1941	14,950	-	14,950	20,163	-	20,163	41,842	4,515	35,113	46,357
1942	13,892	-	13,892	16,416	-	16,416	46,671	4,403	30,308	51,074
1943	16,374	-	16,374	20,712	-	20,712	53,487	6,006	37,086	59,493
1944	17,680	-	17,680	16,593	-	16,593	63,753	10,432	34,273	74,185
1945	21,118	-	21,118	19,089	147	19,236	50,042	8,484	40,207	58,673
1946	12,741	-	12,741	16,777	42	16,819	42,648	9,391	29,518	52,081
1947	11,347	-	11,347	14,916	13	14,929	47,335	11,455	26,263	58,803

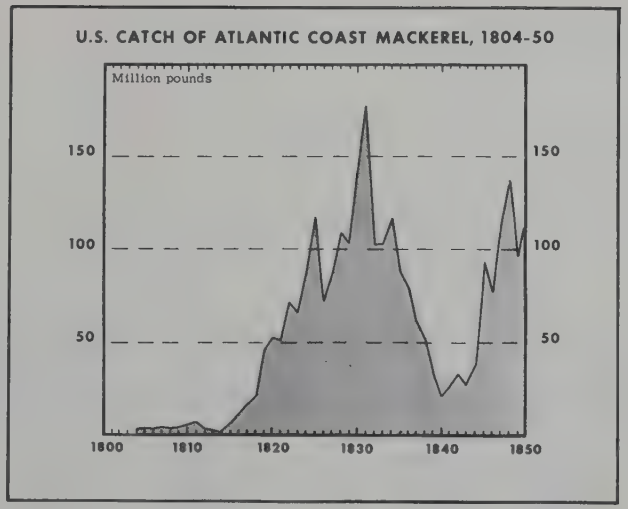
SEE FOOTNOTES AT END OF TABLE.

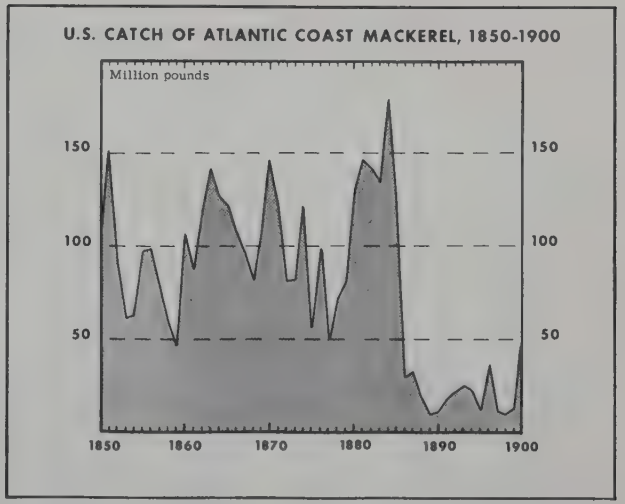
(CONTINUED ON NEXT PAGE)

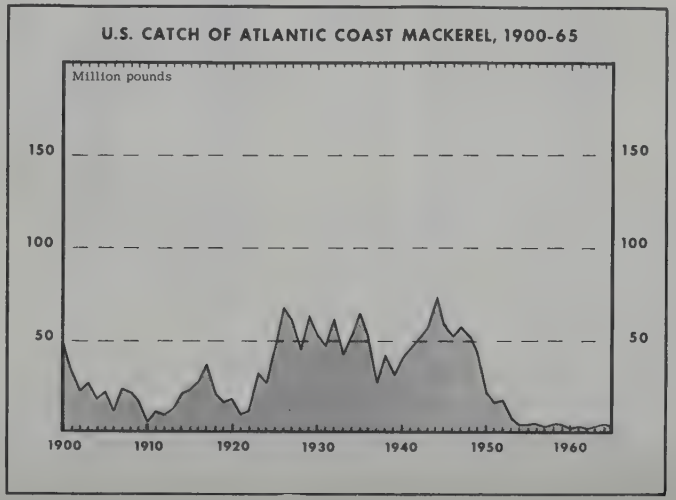
ATLANTIC MACKEREL CATCH, BY STATISTICAL REGIONS, 1871 - 1965 - Continued

YEAR	REGION XIX - GULF OF ST. LAWRENCE			REGION XXI - ATLANTIC COAST OF NOVA SCOTIA AND BAY OF FUNDY			REGION XXII - NEW ENGLAND 1/	REGION XXIII - MIDDLE ATLANTIC	GRAND TOTAL	
	CANADA	UNITED STATES	TOTAL	CANADA	UNITED STATES	TOTAL	UNITED STATES	UNITED STATES	CANADA	UNITED STATES 3/
	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY	QUANTITY
1948.	14,611	-	14,611	11,265	3	11,268	40,780	10,277	25,876	51,060
1949.	10,547	-	10,547	22,976	40	23,016	17,876	24,154	33,523	42,070
1950.	10,164	-	10,164	17,066	19	17,085	14,426	7,649	27,230	22,094
1951.	11,032	-	11,032	13,710	10	13,720	9,925	5,813	24,742	15,748
1952.	13,276	-	13,276	8,715	151	8,866	12,374	5,662	21,991	18,187
1953.	9,422	-	9,422	9,036	35	9,071	6,726	1,784	18,458	8,545
1954.	13,853	-	13,853	11,659	17	11,676	3,055	945	25,512	4,017
1955.	14,362	-	14,362	10,500	9	10,509	3,276	586	24,862	3,871
1956.	12,319	-	12,319	8,814	-	8,814	3,761	273	21,133	4,034
1957.	10,850	-	10,850	8,553	3	8,556	2,096	319	19,403	2,418
1958.	9,002	-	9,002	7,092	-	7,092	3,919	655	16,094	4,574
1959.	3,239	-	3,239	6,212	-	6,212	3,664	383	9,451	4,047
1960.	3,044	-	3,044	10,092	-	10,092	2,238	840	13,136	3,078
1961.	4,425	-	4,425	7,928	-	7,928	2,276	736	12,353	3,012
1962.	3,918	-	3,918	10,917	-	10,917	1,820	256	14,835	2,076
1963.	6,094	-	6,094	11,103	-	11,103	2,653	262	17,197	2,915
1964.	11,874	-	11,874	12,034	-	12,034	3,898	834	23,908	4,732
1965.	(2)	-	(2)	(2)	-	(2)	3,161	1,167	24,855	4,328

1/ INCLUDES DATA ON LANDINGS BY VESSELS ONLY AT BOSTON AND GLOUCESTER, MASS. FOR THE YEARS FROM 1893 TO 1914 INCLUSIVE, AND AT BOSTON AND GLOUCESTER, MASS. AND AT PORTLAND, MAINE, FOR THE YEARS FROM 1915 TO 1930 INCLUSIVE. BEGINNING WITH 1931, ALSO INCLUDES DATA (WHEN AVAILABLE) ON CATCHES BY FISHING BOATS OF LESS THAN 5 NET TONS.
2/ DATA NOT AVAILABLE.
3/ PRIOR TO 1931, THE U.S. CATCH DOES NOT INCLUDE MACKEREL TAKEN BY POUND NETS, FLOATING TRAPS, AND WEIRS: THEREFORE, FOR THESE YEARS, THE TABLE WILL NOT ADD.
NOTE:--THERE WERE MINOR CATCHES FOR AREAS NOT INCLUDED IN THIS TABLE.


U.S. CATCH OF ATLANTIC COAST MACKEREL, 1804-50
Million pounds
150
100
50
1800
1810
1820
1830
1840
1850


U.S. CATCH OF ATLANTIC COAST MACKEREL, 1850-1900
Million pounds
150
100
50
1850
1860
1870
1880
1890
1900


U.S. CATCH OF ATLANTIC COAST MACKEREL, 1900-65
Million pounds
150
100
50
1900
1910
1920
1930
1940
1950
1960

Earliest reliable records are confined to landings in the State of Massachusetts and indicate that no great amounts of mackerel were taken before 1815. In the year 1810 Massachusetts passed an inspection law requiring that barrels containing pickled fish be branded by species. Records kept by the inspection department point to the period 1825-35 as one of great abundance, averaging over 65 million pounds (round weight) a year. During the following 8 years, 1837-45, the annual average production was only 24 million pounds (round weight) in Massachusetts.

Data on Canadian landings are available from 1876 and in general have the same fluctuations as the United States catch but to a more moderate degree. From 1876 to 1949, the United States landings were greater than the Canadian in 57 of the 74 years. The Canadian landings have been greater in each year since 1949.

The total annual mackerel landings in the United States from 1851 to 1885 frequently exceeded 100 million pounds, but this period was followed by scarcity that nearly ruined the industry. In 1910 the entire east coast produced only 6 million pounds, almost none coming from Massachusetts Bay or the Maine coast. The catch started climbing in 1911 and by 1917 had reached 37 million pounds, still far short of the tremendous landings of the 1880's. Another decline set in after 1917, and the catch fell to 10 million pounds in 1921. In keeping with a seesaw pattern of unpredictability, mackerel returned to the Gulf of Maine in 1925, and the total U.S. catch was 49 million pounds. Fluctuations continued until 1944, a high year (74 million pounds), after which production dropped steadily to a low 2.1 million pounds in 1962. Landings in 1965 totaled 4.3 million pounds.

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